



May 12, 2016

To: Douglas County Health Care Providers  
From: Douglas County Health Department

**Re: High Number of *Shigella* Infections in the Community**

Since January 2016, Douglas County Health Department has investigated 44 confirmed cases of *Shigella sonnei* infection, two of which have been hospitalized. Thirty-nine percent were under five years of age and 30% were between 5 and 9 years of age. Forty-eight percent have been associated with child care centers. A total of 40 cases were reported in all of 2015.

**Diagnosis**

- The spectrum of shigellosis manifestations ranges from loose, watery stools without systemic symptoms to more severe presentations with fever, cramps, and bloody diarrhea.
- Consider *Shigella* in patients presenting with at least two of the following symptoms:
  - Acute onset of diarrhea (loose watery stools, typically with blood or mucus in the stool),
  - Fever 100.4 or higher (38 C),
  - Abdominal pain.

**Laboratory Testing**

- Providers should consider ordering a stool culture or multiplex PCR test (GI panel) to guide treatment.
- Laboratories must submit isolates and/or *Shigella* positive specimens to the Nebraska Public Health Laboratory as specified in 173 NAC 1-007.3.

**Use of Antimicrobials**

- *Shigella* is typically a self-limited illness lasting 48 to 72 hours. Antimicrobial therapy, while not generally required in mild cases, is somewhat effective in shortening duration of illness and can decrease transmission by hastening eradication of organisms from feces.<sup>1</sup>
- Resistance to trimethoprim-sulfamethoxazole has been demonstrated in many specimens. Providers may consider empiric treatment with azithromycin, cefotaxime, or ciprofloxacin while awaiting culture and sensitivity results.
- Azithromycin susceptibility testing is not preformed widely for *Shigella* species, but evidence suggests that *Shigella* strains with decreased susceptibility to azithromycin are circulating in the United States.<sup>1</sup> Antimicrobial susceptibility testing results were available for 36 of 44 isolates since January:

Antimicrobial	Number tested	Number susceptible	Percent susceptible
Ampicillin	36	28	77.80%
Cefotaxime	4	4	100%
Ciprofloxacin	9	9	100%
Trimethoprim-Sulfamethoxazole	34	8	23.50%
Azithromycin	0	0	Unknown

## Control Measures

- Child care attendees:
  - Children who are diagnosed with *Shigella* should not be permitted to return to the child care center until 24 or more hours after diarrhea has ceased **AND** until one stool sample (two stool samples collected 24 hours apart for staff members) is negative for *Shigella* species. Stool collection must wait until 48 hours after completing antibiotics.
- Food handlers and child and patient care providers:
  - Because of the small infective dose, patients with known *Shigella* infections should not be employed to handle food or to provide child or patient care until 2 successive stool samples (collected 24 hours apart, but no sooner than 48 hours after discontinuance of antimicrobials) are found to be *Shigella*-free.
- Patients must be educated on the importance and effectiveness of hand washing with soap and water after defecation as a means of curtailing transmission of *Shigella*.
- Patients should not participate in recreational water activities (e.g. swimming pools, water parks, splash parks) for 1 week after symptoms resolve.
- Providers may opt to give a copy of the *Shigella* fact sheet to their patients (page 3 of this advisory).

For additional information, please contact Douglas County Health Department, Communicable Disease Epidemiology at 402.444.7214.

<sup>1</sup>. American Academy of Pediatrics. *Shigella* Infections. In: Kimberlin, DW, Brady, MT, Jackson, MA, Long, SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 706-9.



# Shigellosis

## What is it?

*Shigella* is a bacterium that causes a diarrheal illness called shigellosis.

## What are the symptoms?

Symptoms of shigellosis include diarrhea (often bloody), abdominal pain, stomach cramps, and fever. Sometimes people infected with *Shigella* have no symptoms at all, but can still pass the bacteria to others.

Symptoms usually begin 1 to 3 days after being exposed to *Shigella*.

## How long does it last?

Symptoms usually last about 5 to 7 days. Treatment for shigellosis may be available from your health care provider. People with mild symptoms usually recover on their own without treatment.

## How is it spread?

*Shigella* is found in the stool (feces) of infected people, in food or water contaminated by an infected person, and on surfaces that have been touched by infected people. Shigellosis often occurs in toddlers who are not fully toilet-trained. Family members and playmates of children infected with *Shigella* are at high risk of becoming infected. *Shigella* can spread easily in environments such as day care facilities.

People become infected with *Shigella* by:

- Eating food or drinking liquids contaminated by an infected person.
- Touching contaminated surfaces or objects and then touching their mouth or putting a contaminated object into their mouth.
- Swallowing recreational water contaminated with *Shigella* (recreational water includes lakes, streams, rivers, springs, ponds, swimming pools, hot tubs, Jacuzzis, and water park fountains).
- Not washing hands after using the bathroom or changing diapers and then eating foods.

## What should I do if I have symptoms?

- Contact your health care provider.
- Wash your hands often.

## How can I prevent *Shigella* infections?

- Wash your hands with warm, soapy water for 20 seconds
  - After using the bathroom
  - After changing diapers
  - Before eating
    - Wash your hands more often when someone in your household is sick.
    - Supervise young children to be sure they are properly washing their hands.
- Do not send your child to daycare or preschool if he or she has diarrhea.
- Avoid preparing food for others while you have symptoms.
- Clean and disinfect surfaces with household bleach immediately after vomiting or diarrheal accidents

## Healthy Swimming Tips:

- Do not swallow water or get water in your mouth while swimming.
- Take a shower before swimming.
- Do not swim when you have diarrhea.
- When swimming, take your kids on frequent bathroom breaks – waiting to hear “I have to go” may mean that it’s already too late.
- Change diapers in changing rooms, not poolside or on the beach. Wash hands after changing diapers.